CLAIM AMENDMENTS

Claim Amendment Summary

Claims pending

- Before this Amendment: Claims 1-5, 10-15, 17, 20-23, 25, and 30-34.
- After this Amendment: Claims 1-5, 10, 11, 13-15, 17, 21-23, 25, and 30-37

Non-Elected, Canceled, or Withdrawn claims: 12 and 20

Amended claims: 1, 5, 11, 13, 15, 25, 31, and 33

New claims: 35-37

Claims:

1. (Currently Amended) A method comprising:

identifying a syntax tree representation of a relational database query, wherein the syntax tree comprises a plurality of nodes;

~~for~~ algebrizing ~~a~~ the syntax tree representation of ~~a~~ the relational database query into a relational algebra representation~~, said syntax tree comprising a plurality of nodes, the method comprising~~ by performing at least two operations in a single pass through the syntax tree representation, wherein at least one of the at least two operations is selected from a group of operations comprising:

table and column binding;

aggregate binding;

type derivation;

constant folding;

property derivation; and

tree translation.

2. (Original) The method of claim 1 wherein said at least two operations are executed in a predetermined order at each of said plurality of nodes.

3. (Original) The method of claim 2 wherein

said at least two operations comprise a first operation and a second operation; and

said second operation either executes or does not execute at each of said plurality of nodes and after said first operation based on a result from said first operation.

4. (Previously Presented) The method of claim 1 wherein one of said at least two operations comprises constant folding.

5. (Currently Amended) The method of claim 1 wherein said at least two operations ~~comprises at least all operations from among a group of operations, said group of operations comprising~~ comprise:

table and column binding;

aggregate binding;

type derivation;

property derivation; and

tree translation.

6-9. (Canceled)

10. (Original) A method for algebrizing a syntax tree representation of a relational database query into a relational algebra representation, said syntax tree comprising a plurality of nodes, and said algebrizing comprising a plurality of operations, said method comprising the inclusion of constant folding as an operation among said plurality of operations.

11. (Currently Amended) A system for algebrizing a syntax tree representation of a relational database query into a relational algebra representation, said syntax tree comprising a plurality of nodes, said system comprising:

a plurality of operations, wherein at least one of the plurality of operations is selected from a group of operations, the group of operations comprising:

table and column binding;

aggregate binding;

type derivation;

property derivation; and

tree translation; and

a subsystem for performing at least two of the plurality of operations in a predetermined order at each of the plurality of nodes, in a single pass through said syntax tree ~~representation,~~ representation.

12. (Canceled)

13. (Currently Amended) The system of ~~claim 12~~ claim 11, wherein

said at least two of the plurality of operations comprise a first operation and a second operation;

said subsystem executes said first operation before said second operation at each of said plurality of nodes, and receives a result from said first operation at each of said plurality of nodes; and

said subsystem either executes or does not execute said second operation at each of said plurality of nodes, on a node by node basis, based on a result from said first operation.

14. (Previously Presented) The system of claim 11 wherein each of said at least two of the plurality of operations are selected from the group of operations.

15. (Currently Amended) The system of claim 11 wherein said at least two of the plurality of operations ~~comprises at least all of the group of operations.~~ comprise:

table and column binding;

aggregate binding;

type derivation;

property derivation; and

tree translation.

16. (Canceled)

17. (Previously Presented) The system of claim 11 wherein said algebrizing comprises one or more of:

table and column binding;

aggregate binding;

type derivation;

constant folding;

property derivation; or

tree translation.

18. (Canceled)

19. (Canceled)

20. (Canceled)

21. (Previously Presented) A computer-readable medium comprising computer-readable instructions for algebrizing a syntax tree representation of a relational database query into a relational algebra representation, said syntax tree comprising a plurality of nodes, said computer-readable instructions comprising instructions for performing constant folding on said syntax tree representation.

22. (Previously Presented) The computer-readable instructions of claim 34, further comprising instructions for performing the plurality of operations in a predetermined order at each of said plurality of nodes.

23. (Previously Presented) The computer-readable instructions of claim 22, wherein the plurality of comprise a first operation and a second operation; and wherein the computer-readable instructions further comprises instructions for executing or not executing said second operation at each of said plurality of nodes after said first operation has executed based on a result from said first operation.

24. (Canceled)

25. (Currently Amended) The computer-readable instructions of claim 34, wherein the plurality of operations ~~comprises at least all operations from among the group of operations.~~ comprises:

table and column binding;

aggregate binding;

type derivation;

property derivation;

constant folding; and

tree translation.

26-29. (Canceled)

30. (Original) A computer-readable medium comprising computer-readable instructions for algebrizing a syntax tree representation of a relational database query into a relational algebra representation, said syntax tree comprising a plurality of nodes, and said algebrizing comprising a plurality of operations, said computer-readable instructions comprising instructions for constant folding as an operation among said plurality of operations.

31. (Currently Amended) The method of claim 5 wherein said ~~group of~~ at least two operations further ~~comprises~~ comprise constant folding.

32. (Previously Presented) The system of claim 11 wherein said group of operations further comprises constant folding.

33. (Currently Amended) The system of claim 15 wherein said ~~group~~ at least two of the plurality of operations further ~~comprises~~ comprise constant folding.

34. (Previously Presented) The computer-readable instructions of claim 21 further comprising instructions for performing a plurality of operations in a single pass through the syntax tree representation, wherein at least one of the plurality of operations is selected from a group of operations comprising: table and column binding, aggregate binding, type derivation, property derivation, constant folding, and tree translation.

35. (New) A method for algebrizing a syntax tree representation of a relational database query into a relational algebra representation, said syntax tree comprising a plurality of nodes, the method comprising performing at least two operations, comprising first and second operations, in a single pass through the syntax tree representation, wherein:

said at least two operations are executed in a predetermined order at each of said plurality of nodes;

the second operation either executes or does not execute at each of the plurality of nodes, after the first operation executes, based on a result of the first operation; and

at least one of the at least two operations is selected from a group of operations comprising:

table and column binding;

aggregate binding;

type derivation;

constant folding;

property derivation; and

tree translation.

36. (New) The method of claim 35 wherein one of said at least two operations comprises constant folding.

37. (New) The method of claim 35 wherein said at least two operations comprise:

table and column binding;

aggregate binding;

type derivation;

property derivation; and

tree translation.